Indian Food Processing Industry – A Snapshot

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Abstract

Green revolution has transformed India from a land of shortage to a land of surplus. India is presently the world's second largest producer of food, and has the potential of being the biggest with developing food and agricultural sector. Growing economy, surplus food and changing lifestyle has shifted the consumption pattern, from cereals to more varied and nutritious diet of fruit and vegetables, milk, fish, meat and poultry products. This gradual progression has given rise to the food processing industry in India. The food processing sector in the country with its vast potential has emerged as one of the major driver of economic growth and is often hailed as a sunrise industry.

Interestingly, the fact is while the country's GDP growth rate had increased from 3.5% in 2002-03 to 9% in 2006-07; the food processing sector has grown from 7% to 13.1% during the same period. However, market experts are of the opinion that in future, the food products is going to contribute majorly towards India's GDP growth.

India's food processing sector primarily covers fruit and vegetables; meat and poultry; dairy products, alcoholic beverages, fisheries, plantation, grain processing and other consumer product groups like confectionery, chocolates and cocoa products, Soya-based products, mineral water, high protein foods etc.

India presently accounts for less than 1.5% of international food trade, which indicates that both investors and exporters are yet to gain more from the Indian food processing industry. The industry requires to create necessary infrastructure, state-of-the-art-technology and expand production facilities to match the international quality and standards. To promote the sector, the Indian government had taken several steps such as de-licensing of the sector, several duty and tax relief, financial assistance for infrastructure building and setting up of food processing units.

It is expected that in future bulk investments and modern food processing technologies are going to turn the fortune for Indian food processing industry. The sub-sectors such as soft-drink bottling, confectionery manufacture, fishing, aquaculture, grain-milling and grain-based products, meat and poultry processing, alcoholic beverages, milk processing, tomato paste, fast-food, ready-to-eat breakfast cereals, food additives, flavours etc will become the driving force behind the Indian food processing industry. This paper discusses on these varied issues that the industry is facing.

Introduction

The contribution of agriculture to India's GDP at the time of Independence was 70% and it accounted for 85% of total employment. The share of agriculture in the country's GDP has been gradually declining since then. At present, the contribution of agriculture to GDP is about 25%, but it still engages about 70% of the population. The annual average rate of growth of agricultural GDP has also declined from around 3.5% during mid-eighties to mere 1.5 % during 2006-07. India is the seventh largest country in the world with an extensive administrative structure and independent judiciary, a sound financial & infrastructural network and above all a stable and thriving democracy. Due to its diverse agro-climatic conditions, it has a wide-ranging and large raw material base suitable for food processing industries. Presently a very small percentage of these are processed into value added products due to many constraints. India is one of the biggest emerging markets, with over 1000 million population and a 300 million strong middle class. Rapid urbanisation, increased literacy and rising per capita income have all caused rapid growth and changes in demand patterns, leading to tremendous new opportunities for exploiting the large latent market.

It is estimated that if the country has to maintain a GDP growth rate of over 8%, the agricultural sector has to grow at the rate of at least 4%. The country has a huge potential for growth in agriculture with about 184 million hectares of arable land and diverse agro climatic conditions, suitable for cultivation of a wide variety of crops. India produces annually 90 million tonnes of milk (highest in the world), 150 million tonnes of fruits & vegetables (second largest), 485 million livestock (largest), 204 million tonnes food-grain (third largest), 6.3 million tonnes of fish (3rd largest), 489 million Poultry and 45,200 million eggs. India's agricultural production base is strong but at the same time wastage of agricultural produce is massive. Processing level is very low i.e. around 2.2% for fruits & vegetables compared to countries like USA (65 %), Philippines (78%) and China (23)%; 26% for marine, 6% for poultry and 20% for buffalo meat, as against 60-70% in developed countries. The share of India's export of processed food in global trade is only 1.5% at present. Even, within the country, share of fruits and vegetables processed is much less when compared to other agricultural products such as milk (35%) and Marine Products (26%). More importantly the lack of processing and storage of fruits and vegetables results in huge wastages estimated at about 35%, the value of which is approximately Rs.33, 000 Crore annually.

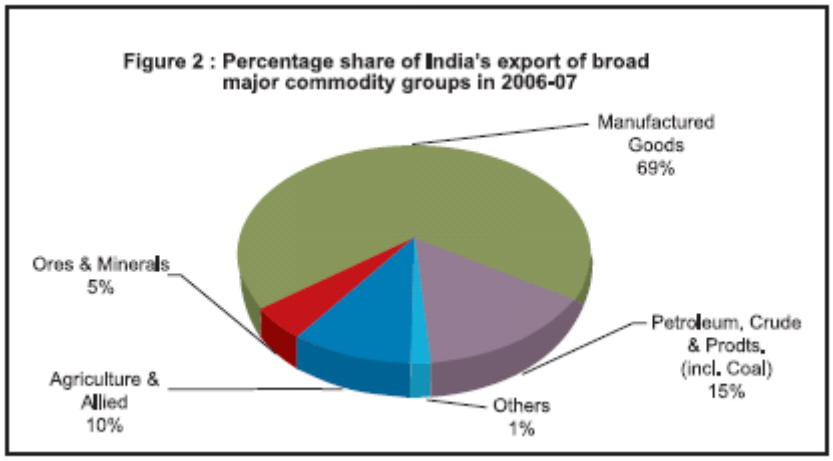
A developed food processing industry would not only reduce wastages, but would also increasingly fetch remunerative income to farmers which is another problem before the agriculture sector at present. At present the food processing sector employs about 13 million people directly and about 35 million people indirectly.

While the productivity needs a definite improvement, it is increasingly becoming evident that only a vibrant food processing sector can lead to increasing farm gate prices and thus increase income levels, reduce wastages and increase employment opportunities. An average Indian spends about 50% of household expenditure on food item and also the demand for processed / convenience food is constantly on rise. As india has liberalized its overall policy regime with specific incentives for high priority food processing sector, provide a very conducive environment for investments and exports in the sector

The Food Processing Industry sector in India is one of the largest in terms of production, consumption, export and growth prospects. The government has accorded it a high priority, with a number of fiscal reliefs and incentives, to encourage commercialisation and value addition to agricultural produce; for minimising pre/post harvest wastage, generating employment and export growth. Important sub sectors in food processing industries are:- Fruit & Vegetable Processing, Fish-processing, Milk Processing, Meat & Poultry Processing, Packaged / Convenience Foods, Alcoholic beverages & Soft drinks and Grain Processing etc. With all these credentials, India accounts for less than 1.5 per cent of international food trade. This indicates vast scope for both investors and exporters.

Exports:

The Indian export market is dominated by manufacture goods at 69 per cent followed by petroleum, coal and crude products at 15 per cent. The agricultural and allied products occupies the third slot with 10 per cent as shown in the pie diagram below.



Looking into the agricultural exports, the table shown below represents the export statement for three years (from 2004-05 to 2006-07). From the statement it is evident that the quantum of exports of processed food is moving up from around nine per cent to 15 per cent (in quantity terms) and from around 22 per cent to 29 per cent (in value terms).

Export statement (2004-2005 to 2006-2007)

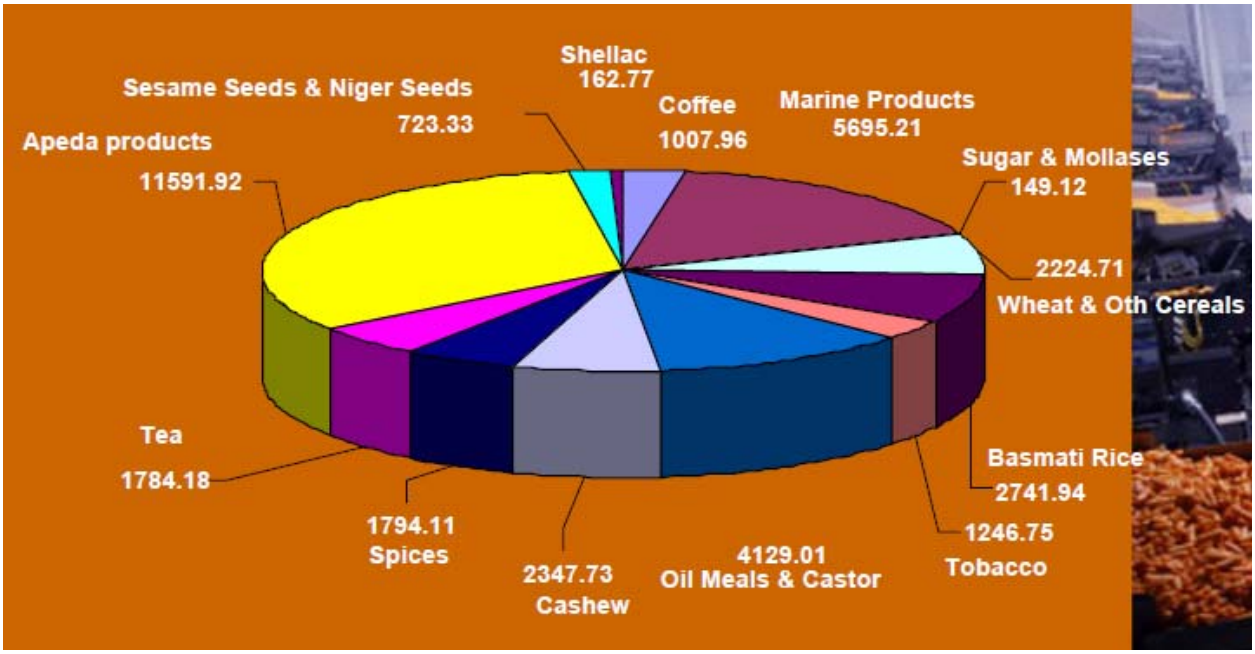
Qty in : mts value in:rs. Lakhs

	2004-05		2005-06		2006-07	
	Qty	Value	Qty	Value	Qty	Value
Floriculture & seeds						
Floriculture	27769.06	22110.99	35186.00	29941.28	42016.60	64983.50
Fruits & vegetables seeds	6726.58	6601.04	7472.90	9283.01	8031.09	12146.68
Total for floriculture & seeds	34495.64	28712.03	42658.90	39224.29	50047.69	77130.18
Fruits & vegetables						
Fresh onions	870216.85	64411.9	960507.32	70815.88	1378373.17	116330.57
Other fresh vegetables	190689.06	23376.54	217280.54	26769.35	275909.49	43002.06
Walnuts	5851.16	9621.92	5256.56	11447.33	5062.06	11803.06
Fresh mangoes	53480.02	8961.06	69606.6	12811.12	79060.88	14193.95
Fresh grapes	39338.95	12844.57	54049.87	21460.85	85897.79	30192.45
Other frsh fruits	136954.26	17155.36	158339.26	22567.29	159569.71	25643.64
Total for fruits & vegetables	1296530.30	136371.35	1465040.15	165871.82	1983873.10	241165.73
Processed fruits & vegetables						
Dried & preserved	72814.66	22736.78	124495.71	36411.26	118787.46	42406.20

vegetables						
Mango pulp	95857	31571.94	134613.2	36424.12	156835.52	50582.79
Pickles & chutneys	71975.51	12934.71	135381.85	26098.14	145216.00	29359.48
Other processed fruits & veg	84646.21	28899.85	107335.24	37021.34	129110.24	50814.71
Pulses	266987.85	58985.45	441742.59	109505.94	247532.33	77064.60
Total for processed fruits & vegetables	592281.23	155128.73	943568.59	245460.80	797481.55	250227.78
Animal products						
Buffalo meat	337777.65	177451.85	459937.63	262956.97	494111.48	321170.26
Sheep/goat meat	9024.49	8127.43	7177.51	8037.11	5481.55	6304.85
Poultry products	1062265.65	28774.23	1185142.77	31565.71	710880.12	31590.27
Dairy products	42160.06	35869.23	59745.73	55227.6	37391.33	39515.36
Animal products	552.73	1263.99	1125.82	1751.33	435.98	950.65
Processed meat	1359.7	944.85	256.04	242.7	825.01	680.45
Natural honey	10523.24	6826.84	16769.23	11621.79	8135.6	6091.63
Total for animal products	1463663.52	259258.42	1730154.73	371403.21	1257261.07	406303.47
Other processed foods						
Groundnuts	177154.08	54702.39	190053.34	51368.77	251428.65	79846.01
Guar gum	131299.98	68947.69	186718.4	104923.29	189304.36	112579.2
Jaggery & confectionery	40561.49	10822.88	112644.06	26497.09	455935.85	87346.11
Cocoa products	2313.3	2765.63	2147.09	2183.27	2891.00	3507.85
Cereal preparations	51803.14	29204.34	76880.63	39395.70	79849.48	46271.31
Alcoholic beverages	30748.49	11774.41	55532.46	16048.57	28778.68	11661.83
Miscellaneous preparations	54397.88	23214.83	49606.69	22577.20	57696.80	22364.88
Total for other processed foods	488278.36	201432.17	673582.67	262993.89	1065884.82	363577.19
Cereals						
Basmati rice	1162989.16	282389.85	1166562.79	304309.26	1045714.95	279280.89
Non basmati rice	3615109.55	394501.93	2921601.91	317816.79	3702191.99	424307.84
Milled products	140666.2	15080.76	50901.47	6468.38	69944.78	9589.57
Wheat	2009343.03	145982.45	746173.23	55752.78	46633.21	3535.09
Other cereals	1178023.72	79382.54	567213.16	45382.12	730275.22	59925.14
Total for Cereals	8106131.66	917337.53	5452452.56	729729.33	5594760.15	776638.53
Grand total	11981380.7	1698240.23	10307457.6	1814683.3	11749521.6	2115042.88

Moving further into the details, the pie chart below gives the details of Indian agricultural exports for the year 2004-05 (which is not very different now).

Total - $ 7946.15 million (Rs. 35598.74 crores)



With an industry size of US$70bn, the food processing industry in India ranks fifth in terms of production, consumption, export and expected growth. The industry contributed 6.3% to India's GDP in 2003 and had a share of 6% in total industrial production. The industry employs 1.6mn workers directly and accounts for 13% of the country's exports and 6% of total industrial investment. The overall food processing industry has achieved a growth rate of 8% in FY05 with an estimated figure of Rs3,584bn. However, the unorganised, small players account for more than 70% of the industry's output in volume terms and 50% in value terms. The industry is largely unorganised, 75% of the processing units belong to the unorganised category. The organised category though small, is growing. India's share in the global processed food trade was a minuscule 1.5%. There are very few large Indian food brands with an established global presence. Most exports are in bulk form and branding is minimal. Majority of the food units are engaged in primary processing. Production base of secondary and tertiary processed foods is low, resulting in low value addition. Value addition to foods by processing is a mere 8% of total

production currently and is expected to increase to 35% by the end of 2025. The level of processing of fruits and vegetables is a mere 2% and is expected to increase to 10% in 2010 and to 35% in 2025, according to the Ministry of Food Processing, India.

As a result of several **policy initiatives** undertaken since liberalisation in August 1991, the industry has witnessed fast growth in most of the segments. As per a recent study on the food processing sector, the turnover of the total food market is approximately Rs.250,000 crores (US $ 69.4 billion) out of which value-added food products comprise Rs.80,000 crores (US $ 22.2 billion). Primary food processing is a major industry with lakhs of rice-mills/hullers, flour mills, pulse mills and oil-seed mills. There are several thousands of bakeries, traditional food units and fruit/veg./spice processing units in unorganised sector. In the organised sector, there are over 820 flour mills, 418 fish processing units, 5198 fruit/veg processing units, 171 meat processing units. The size of the semi-processed and ready to eat packaged food industry is over Rs. 4000 crores (US $ 1 billion) and is growing at over 20%.

India is the world's second largest producer of fruits & vegetables, but hardly 2% of the produce is processed. India is the land of spices producing all varieties worth over Rs. 3500 crores (US $ 900million) amounting to 25-30% of world production, which is processed for value-addition and export. It grows 22 million tonnes of oilseeds covering most of the varieties. Other important plantation products include tea, coffee, cocoa and cashew. It has large marine product and processing potential with varied fish resources along the 8041 km. long coastline, 28000 km. of rivers and millions of hectares of reservoirs & brackish water. India's livestock population is largest in the world with 50% of world's buffaloes and 20% of cattles, but only about 1% of total meat production is converted to value added products. India is the largest milk producer in the world and about 15% of the total milk production is processed through the organised sector.

The biggest bottleneck in expanding the food processing sector, in terms of both investment and exports, is lack of adequate infrastructure. Without a strong and dependable cold chain vital sector like food processing industry which is based mostly on perishable products cannot survive and grow. Even at current level of production, farm produce valued at Rs 70,000 million is being wasted every year only because there is no adequate storage, transportation, cold chain facilities

and other infrastructure supports. An estimated 25% of fruits and vegetables valued at about Rs250bn-300bn is wasted annually due to poor post harvesting technology and inadequate storage and transportation. Cold chain facilities are miserably inadequate to meet the increasing production of various perishable products like milk, fruits, vegetables, poultry, fisheries etc.

In order to promote the food and allied industries,the Government of India has established, a few national level organisations, which in one way or the other support the industry. These institutions either do fundamental and or applied research or undertake some developmental activity like boosting production of raw material required for the industry, developing new varieties, developing physical infrastructure to reduce post-harvest losses and measures to promote exports. They also offer Consultancy services. Some of these important institutions are mentioned below:

1. Agricultural And Processed Food Products Export Development Authority (Apeda), N. Delhi
2. Container Corporation Of India
3. Central Food Technological Research Institute, Mysore
4. National Seeds Corporation
5. Indian Council Of Agricultural Research
6. Indian Agricultural Research Institute
7. Export Credit Guarantee Corporation Of India Ltd.
8. Indian Diplomatic Missions
9. India International Marketing Centre
10. National Horticulture Board
11. Indian Institute Of Sugarcane Research, Lucknow (Up)
12. Sugarcane Breeding Institute, Coimbatore (Tamilnadu)
13. Central Tuber Research Institute, Trivandrum
14. National Research Centre For Cashewnut, Puttur
15. National Research Centre For Mushrooms, Solan (Hp)
16. Project Directorate Of Vegetable Research, Varanasi (Up)
17. National Dairy Research Institute, Karnai (Haryana)
18. National Centre For Trade Information

Policy Initiatives

Government is committed to enhance growth of food processing sector and put it on a robust footing. Government is actively encouraging investment in agro processing industries to reduce wastage and encourage value addition. Accordingly, for giving a boost to FPI sector, Government has recently initiated several measures besides tax concessions as per details given in the next chapter.

The major focus of the Ministry aim at increasing Government investment in creating the farm to market supply chain, market processing infrastructure to attract more private investment. It is also proposed to strengthen R& D, HRD, in the food processing sector, establish more food testing laboratories to ensure quality of food products and compliance of national & international standards, etc.

Since liberalisation several policy measures have been taken with regard to regulation & control, fiscal policy, export & import, taxation, exchange & interest rate control, export promotion and incentives to high priority industries. Food processing and agro industries have been accorded high priority with a number of important relieves and incentives. Some of the important policy changes are as follows

Regulation & Control :

- As per extant policy FDI up to 100% is permitted under the automatic route in the food infrastructure (Food Park, Cold Chain/warehousing).
- In so far as food retail is concerned the FDI policy does not permit FDI into Retail sector except Single Brand Product Retailing. This policy is uniform for all retailing activity.
- FDI policy for manufacture of items reserved for the SSI sector is uniform for all items so reserved and a separate dispensation for items in the food processing sector is not contemplated.
- The policy for distilation of alcohol has been announced vide Press Note 4 (2006) according to which FDI upto 100% is permitted on the automatic route for distillation & brewing of alcohol subject to licensing by the appropriate authority.

- No industrial license is required for almost all of the food & agro processing industries except for some items like: beer, potable alcohol & wines, cane sugar, hydrogenated animal fats & oils etc. and items reserved for exclusive manufacture in the small scale sector. Items reserved for S.S.I. include pickles & chutneys, bread, confectionery (excluding chocolate, toffees and chewing-gum etc.), rapeseed, mustard, sesame & groundnut oils (except solvent extracted), ground and processed spices other than spice oil and olioresins, sweetened cashew nut products, tapioca sago and tapioca flour.
- Upto a maximum of 24% foreign equity is allowed in SSI sector
- Use of foreign brand names are now freely permitted.
- MRTP (Monopolies & Restrictive Trade Practices Act) rules and FERA (Foreign Exchange Regulation Act) regulations have been relaxed to encourage investment and expansion by large corporates.
- Most of the items can be freely imported and exported except for items in the negative lists for imports & exports.. Capital goods are also freely importable, including second hand ones in the food processing sector.

Fiscal policy & Taxation :

- Wide ranging fiscal policy changes have been introduced progressively. Excise & Import duty rates have been reduced substantially. Many processed food items are totally exempt from excise duty.
- Custom duty rates have been substantially reduced on plant & equipments, as well as on raw materials and intermediates, especially for export production.
- Corporate taxes have been reduced and there is a shift towards market related interest rates. There are tax incentives for new manufacturing units for certain years, except for industries like : beer, wine , aerated water using flavouring concentrates, confectionery & chocolates etc.
- Indian currency (rupee) is now fully convertible on current account and convertibility on capital account with unified exchange rate mechanism is foreseen in coming years.
- Repatriation of profits is freely permitted in many industries except for some, where there is an additional requirement of balancing the dividend payments through export earnings.

Export promotion :

- Food processing industry is one of the thrust areas identified for exports. Free trade zones (FTZ) and export processing zones (EPZ) have been set up with all infrastructure. Also, setting up of 100% Export oriented units (EOU) is encouraged in other areas. They may import free of duty all types of goods, including capital foods.
- Capital goods, including spares upto 20% of the CIF value of the Capital goods may be imported at a concessional rate of Customs duty subject to certain export obligations under the EPCG scheme. Export linked duty free imports are also allowed.
- Units in EPZ/FTZ and 100% Export oriented units can retain 50% of foreign exchange receipts in foreign currency accounts.
- 50% of the production of EPZ/FTZ and 100% EOU units is saleable in domestic tariff area.
- All profits from export sales are completely free from corporate taxes. Profits from such exports are also exempt from Minimum Alternate Tax (MAT)

Leading players in this sector are

Agro Foods Pvt Ltd	HLL Ltd	Parle Products Pvt Ltd
Britannia Industries Ltd	Haldiram Pvt Ltd	PepsiCo Inc
Dabur India Ltd (Foods)	ITC Ltd	General Mills-Pillsbury
Dynamix Dairy Ind Ltd	MTR Foods Ltd	Surya Foods and Agro Pvt Ltd
Gits Food Products Pvt Ltd	Nestle Ltd	Tata Chemicals Ltd
Godrej Industries Ltd-Foods Division	Parle Agro Pvt Ltd	

Foreign Direct Investment

The total inflow of FDI in FPI sector during the last eight years since 2000-01 year wise details of FDI inflow has been as under. This shows a mixed trend for the entire eight year period but shows an increasing trend from 2004-05 onwards.

Year	Foreign Direct Investment (Rs. in Crores)
2000-01	198.13
2001-02	1,036.12
2002-03	176.53
2003-04	510.85
2004-05	174.08
2005-06	182.94
2006-07	441.00
2007-08 (up to November 2007)	61.63
Grand Total	**2781.28**

The table below gives the SWOT analysis of Indian Food Processing Industry.

Strengths	**Weaknesses**
Round the year availability of raw materials	High requirement of working capital
Social acceptability of agro-processing as important area and support from the central government	Low availability of new reliable and better accuracy instruments and equipments
Vast network of manufacturing facilities all over the country	Inadequate automation with respect to information management
Vast domestic market	Remuneration less attractive for talent in comparison to contemporary disciplines
	Inadequately developed linkages between R&D labs and industry
Opportunities	**Threats**
Large crop and material base in the country due to agro-ecological variability offers vast potential for agro-processing activities	Competition from global players
Integration of developments in contemporary technologies such as electronics, material science, computer science, bio-technology etc. offer vast scope for rapid improvement and progress	Loss of trained manpower to other industries and other professions due to better working conditions prevailing there which may lead to further shortage of manpower.
Opening of global markets may lead to export of our developed technology to facilitate generation of additional income and employment opportunities.	

The way forward…

Food processing industry has been facing constraints like non-availability of adequate critical infrastructural facilities, like cold chain, packing and grading centres, lack of adequate quality control and testing infrastructure, inefficient supply chain, shortage of processable varieties of farm produce, seasonality of raw material, high inventory carrying cost, high taxation, high packaging cost, affordability and cultural preference for fresh food.

It is essential to build sustainable supply chains, which will link the farmer to the processing and marketing centres. One of the main reasons for non-development of cold chains in Indian agriculture is the failure to build critical components of the supply chain. In the absence of on-farm cooling and grading arrangements, the farmer is compelled to sell his produce to the '***arhtia'*** without waiting for a better price. If he is enabled to grade and store his produce close to farm, the farmer will be empowered to demand and obtain a better price from the processors and also add value to his produce.

Considerable investments are required in rural infrastructure and components of the supply chain by way of grading and packing centres, controlled atmosphere storage facilities, reefer vans, testing laboratories, etc., which may not come from private sources. It is, therefore, essential that public investment is significantly increased to fund these components of rural infrastructure to enable private enterprise to take up the remaining components of the supply chain which can be undertaken commercially. This is borne out by the experience of developed countries where the State has stepped in to build rural infrastructure in a big way.

The failure to direct significant public investment into storage and processing infrastructure, which could then be managed on a public private partnership basis involving all stakeholders, may be the reason for low levels of investment in processing facilities, lack of value addition and the inability of the farmer to obtain better prices and incomes. The management of the supply chain is better undertaken with the involvement of all stakeholders on a PPP basis.

It is expected that in future bulk investments and modern food processing technologies are going to turn the fortune for Indian food processing industry. The sub-sectors such as soft-drink bottling, confectionery manufacture, fishing, aquaculture, grain-milling and grain-based products, meat and poultry processing, alcoholic beverages, milk processing, tomato paste, fast-

food, ready-to-eat breakfast cereals, food additives, flavours etc will become the driving force behind the Indian food processing industry.

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